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# THE PROTHETIC VOWEL IN GREEK 

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[The so-called prothetic vowel in Greek finds its ultimate explanation in IndoHittite. In Indo-Hittite bases beginning with the first, third, or fourth laryngeal, the first syllable was retained everywhere if it was in the full grade. If it was in the reduced grade, it was lost everywhere except in Hittite, Greek, and Armenian. If the second consonant was $w$, the first three laryngeals could unite with it to form a long voiceless $h w$ which appears as spiritus asper in Greek; this accounts for the Attic and Homeric alteration of $\epsilon \delta \nu o \nu$ and $\epsilon \in \delta \nu o \nu$. If the initial syllable began with the second laryngeal (.) and was in the reduced grade, it was lost everywhere, but the laryngeal united with a following liquid or nasal to give the long voiceless $\bar{\lambda}, \bar{\mu}, \bar{\nu}$ which 'make position' in Homer.]

The so-called prothetic vowel is one of the least understood phenomena of the Greek language. This misunderstanding is in a measure due to the double nature of 'prothesis' itself. There are cases of true vocalic prothesis, where, as the term implies, a vocalic element is added initially to the root, presumably for purely phonetic reasons. This vocalic increment usually appears before consonant clusters, as iктivos: Skt. śyenas. In other cases etymological and comparative evidence seems to indicate that the vowel, wrongly termed prothetic, was an inherited part of the root which was lost in most Indo-European dialects, as in the cognate pairs ${ }_{\epsilon}^{\prime} \delta \omega$ : edō, but ó $\delta \dot{\omega} \nu$ : dēns; also compare övoua : Arm. anun, but Lat. nōmen, Skt. näma. In addition to these two categories, there are vocalic prefixes, such as $\dot{o}-$ 'same' and $\dot{a}$ - $(<n)$ 'in'. Further, there are a few words whose prothesis remains obscure and indeterminate, and where a double root is possibly to be assumed, as in the pair $\beta^{\prime} \dot{\prime}$ oos/ $\dot{\partial} \beta \epsilon \lambda \lambda^{\prime}$ s.

This paper will be concerned primarily with false prothesis, where the vowel in question is really a part of the root; true prothesis is rarer and more easily discerned. To arrive at any consistent rationale of this phenomenon it will be necessary to go back to Indo-Hittite bases for all words cited, Indo-Hittite being a prior state of Indo-European where the laryngeal consonants were phonemic and intact. It will be clear from section III why the laryngeals must be assumed in the etiology of Greek prothesis. The bibliography on the laryngeal hypothesis is by now fairly extensive, ${ }^{1}$ and opinions on the subject have reached a certain degree of crystallization. The writer agrees in general with E. H. Sturtevant, whose views may be briefly summarized. There were four laryngeal consonants in Indo-Hittite, which were lost in Indo-European: (1)', (2) :, (3) $x$, and

[^0](4) $\gamma$. Their exact phonetic nature can perhaps not be defined at this time, but the first two were probably glottal stops, of palatal and velar color respectively, while the last two were doubtless spirants; the fourth alone was certainly voiced, while the others seem to have been voiceless. ${ }^{2}$ The third and fourth appear in Hittite as $h$, the $h$ corresponding to the third being written double when this was possible, but never the $h$ corresponding to the fourth. ${ }^{3}$ Before the laryngeals disappeared in Indo-European they had altered both the quantity and quality of adjacent vowels. They all lengthened preceding short vowels, which became the 'inherited long vowels' of conventional Indo-European comparative grammar. When antevocalic the laryngeals had no effect on vowel quantity, but the second and third changed a following (or preceding) $e$ to $a$. The only long vowels in Indo-Hittite were lengthened grades. The Indo-European shwa primum ( $\partial$ ), then, is the result of the reduction of the original short $e$, that is, shwa secundum (b), plus a laryngeal. Whether there was a still further reduction, that is, a vocalization of the laryngeal per se, is problematical, but not at all impossible. Any initial vowel in Indo-European followed an initial laryngeal in Indo-Hittite.

## I. The Prothetic Vowel

The reasons for assuming that vocalic 'prothesis' in Greek was inherited are, in general, three. (1) Armenian agrees with Greek in this respect, $a$ - being the Armenian 'prothetic vowel', though $e / i$ - sometimes corresponds to Greek $\boldsymbol{\epsilon}$-; e.g. Skt. nāma, Lat. nōmen : Gk. övoua, Arm. anun; or Skt. rajas, Goth. riqis: Gk. ${ }_{\epsilon} \epsilon \in \beta$ os, Arm. erek. (2) Cognate words with the accent on the first syllable show the vowel; e.g. $\epsilon \delta \omega$ : Skt. $a d m i$, Lat. edō, but $\dot{\delta} \delta \dot{\omega} \nu:$ Lat. dēns, etc. (3) Vedic reduplication with a long vowel indicates the presence of an original initial vowel which was lost in Sanskrit, but which remained as 'prothetic' in Greek, e.g. $\dot{\epsilon} \gamma \epsilon i \rho \omega$ : Lat. expergīscor (< ${ }^{*}$ ex-per-grīscor), Skt. gr, but jägr and $\bar{\epsilon} \gamma \rho \dot{\prime} \gamma \quad \gamma \rho a$. The idea that the 'prothetic vowel' is in reality an inherited part of the root, ultimately due to an initial laryngeal syllable, is not new, having been advanced by nearly all the holders of the laryngeal hypothesis, of whom Benveniste has made the most recent statement: ${ }^{4}$

La 'prothèse vocalique' du grec et de l'arménien a donc, au moins en partie, un fondement étymologique: c'est la reste d'une initiale $₹$-antéconsonantique.
But the phenomenon was first noticed by Möller, who claimed that an IndoSemitic *Aewén, for example, resulted in an IE *wén, though the initial laryngeal syllable was sometimes retained, especially in Greek. ${ }^{5}$ From the catalogue of

[^1]words with 'prothesis' which follows it is perhaps possible to alter and expand Möller's supposition into a 'law', namely: In Indo-Hittite bases beginning with the first, third, or fourth laryngeal, the first syllable was retained everywhere if it was in the full grade. If the first syllable was in the reduced grade, it was lost everywhere except in Hittite, where it appears as $a$ - or $h a$-, Greek, where it appears as $\dot{a}-$, $\dot{\epsilon}-$, or $\dot{o}-$, and Armenian, where it appears as $a-,(e / i-)$. If the initial syllable began with the second laryngeal (:) and was in the reduced grade, it was lost everywhere, but the laryngeal united with a following liquid or nasal and made it long and voiceless.

The situation is perhaps not as clear-cut as one would like, for various contaminations, assimilatory and dissimilatory changes have played their role of havoc. Sturtevant has convinced me that $\epsilon$ and $o$ are contaminated shwas for the usual $a$; the same was probably true in Armenian, where we sometimes have $e$ or $i$ for the usual $a$. Also, there are very few certain cases of IH bases with initial fourth laryngeal, the prefix $e-/ o-(<\mathrm{IH} \gamma e-)$ 'with, together, same' accounting for many words with seeming IH fourth laryngeal initial. On the whole, however, the outlines of this phonetic development are fairly well defined, as the following table shows. I posit IH bases in themes I and II. ( $A=$ laryngeal 1,3 , or $4 ; e=$ original vowel, $C=$ consonant other than laryngeal.)

Theme I: $A e ́ C(C)$
*Aérw- 'red': Skt. arunas, Gk. èpevoos.
*'éd- 'eat': Lat. edō, Skt. admi, Gk. $\epsilon \delta \omega$, Hitt. etmi.
*'és- 'is': Skt. asti, Lat. est, Lith. esmi, Goth. ist, Gk. '̇ $\sigma \tau i$, Hitt. eszi.
*xélk- 'defend': Goth. alhs 'temple', OE ealhian, Gk. à $\lambda \kappa \dot{\eta}$.
*xéwy- 'bird': Lat. avis, Arm. hav.
*xéwg- 'increase': Lat. augē̄, Skt. ojas, Goth. aukan, Gk. ajそáv.
*Aérg- 'reach, extend': Gk. öprvıa.
*:énbh- 'cloud, mist': Skt. ambhas, Arm. amp, Gk. àфoós.
*, élbh- 'white': Lat. albus, OHG el$b i z$ 'swan', Gk. à $\lambda$ фós 'white spot', Hitt. alpas 'cloud'.
The rest of this section is a catalog of the most important Greek words that exhibit 'prothesis' as an inherited part of the root. The second section will treat
words that have spiritus asper alternating with 'prothesis'; the third will treat words of the last type listed above.
à $\boldsymbol{\epsilon} \boldsymbol{\epsilon} \rho \omega$ 'gather, assemble' : Lith. gurgulē 'Menge' has a- probably from $n$ 'in'. á $\gamma o \sigma \tau o ́ s ~ ' h a n d ' ~: ~ S k t . ~ h a s t a s, ~ L i t h . ~ p a z ̌ a s t i ̀ s ; ~ t h e ~ a s p i r a t i o n ~ i n ~ S a n s k r i t ~ i s ~ d o u b t-~$ less due to laryngeal $x$ absorption (cf. $\theta v \gamma a ́ r \eta \rho: d u h i t a \bar{a}) ;<{ }^{*} x b g o s t-$.
$\dot{a}(f) \epsilon i \delta \omega \omega$ 'sing', àoıós, aúóń, á $\eta \delta \dot{\omega} \nu$ : (possibly) Skt. vadati 'speaks', < *xbweud(reduplication).
$\dot{a}(f) \epsilon i \rho \omega$ 'raise' : (possibly) Skt. varşma 'height', Lith. sver̃ti 'weigh', < *Abwer-
$\dot{a}(f) \dot{\epsilon} \xi \omega$ 'increase' : Skt. vakṣayati, Goth. wahsjan, Lat. augeō, < *xbweg-.
$\ddot{a}(f) \epsilon \theta$ गos 'contest' : Goth. wadi, Skt. vadhati, $<^{*} A$ bwedh-.
áкov́ $\omega$ 'hear' : Goth. hausjan, Hom. $\nu \eta \kappa о v \sigma \tau \epsilon \epsilon \omega$ 'disobey' with lengthened $n$ as a result of initial laryngeal, $<{ }^{*}$ Abkew-.
à $\lambda \epsilon ́ \gamma \omega$ 'am anxious' : Lat. dī-ligō, ON lakr 'bad', < *Ableg-; Theme I in ä $\lambda \gamma o s$, $\dot{a} \lambda \gamma^{\prime} \omega$ : Lat. algē, $<{ }^{*}$ Aelg-
ä $\lambda \epsilon \epsilon \sigma o \nu$ 'drinking cup' : OHG lı̄d 'cup' (Lith. lytùs 'rain'?), $<{ }^{*} A$ bleit-.
à $\lambda \epsilon i \tau \eta s$ 'guilty' : OHG leid, Lith. letéti ‘trouble', $<{ }^{*} A$ bleit- ( $A=$ a laryngeal different from the one in the preceding paragraph).
$\dot{a} \lambda \epsilon \epsilon \xi \omega$ 'defend, protect' : Skt. rakşati, < *Ablek-; Theme I in $\dot{a} \lambda \kappa \dot{\eta}$ : Goth. alhs.
à $\lambda i \nu \omega$ 'anoint' : Skt. lināti, limpati; ả $\lambda \epsilon i \phi \omega$ 'anoint' probably by contamination of this and $\lambda i \pi o s$ ( $<{ }^{*}$ ? lip-), $<{ }^{*}$ Ablein-.

$\dot{a} \lambda \omega \eta$ ' 'garden' : Skt. lavas 'cutting', < ${ }^{*} A b l e A w$-; Att. ä $\lambda \omega$ s has unexplained aspiration.
$\dot{a} \lambda \omega \pi \pi \eta \xi$ 'fox' : Skt. lopacas, Arm. atues, $<{ }^{*}$ AbleApek-.
á $\mu \dot{\alpha} \rho a$ 'conduit' : (probably) Lat. mare, ON moerr 'sea' < ${ }^{*} A$ bmar-.
$\dot{a} \mu a \rho \tau i a$ 'mistake' : Skt. mrssa 'wrongly', Lith. mirršti 'forget', < *Aımert-;
$\nu \eta \mu \rho \tau \dot{\eta} s$ 'infallible' shows initial long $n$ from laryngeal. On aspiration cf. ä $\lambda \omega s$ above.
$\dot{a} \mu a \rho \dot{v} \sigma \sigma \omega$ 'gleam' : Skt. marīciş, Lith. mìrkanis 'glance', < *Abmer-w-k-.
á $\mu о ґ \beta \dot{\eta}$ 'change' : Lat. migrāre, $<{ }^{*}$ Aımeigw-.
$\dot{a}^{\mu}{ }^{\prime} \lambda \gamma \omega$ 'milk' : Lat. mulgeō, mulctō, OHG milchu, Lith. milž̌ti, < *Aımelg-.
$\alpha^{\mu} \mu^{\prime} \rho \gamma \omega$ 'gather' : Skt. mrjati, < ${ }^{*}$ Aımerg-; Vedic reduplication in māmrj, with $\bar{a}$ confirming laryngeal; ó $\boldsymbol{o} \rho \gamma \gamma \nu \mu \iota$ has $\dot{o}$ - by assimilation.
à $\mu \epsilon \dot{v} \sigma a \sigma \theta a \iota ~ ' m o v e ' ~: ~ L a t . ~ m o v e o ̄, ~ L i t h . ~ m a ́ u t i, ~<~ * A b m e w-. ~ . ~$
à $\nu a ́ \gamma \kappa \eta ~ ' n e c e s s i t y ': ~ L a t . ~ n e c e s s e, ~(p r o b a b l y) ~ H i t t . ~ h e n k z i ~ ' d e t e r m i n e s ', ~<~$
*xbnek-. The Greek word, however, might be Theme I with reduplication or Theme II with inserted nasal.
à $\nu \dot{\rho} \rho$ 'man': Skt. nara, Lat. Nerō, < *Abner-.
$\dot{a} \sigma \tau \dot{\eta} \rho$ 'star' : Lat. stella, NE star, Arm. astt, is probably a Semitic loanword, cf. Ishtar.
ávít' $\omega$ 'call' : Lat. iūbilum, $<^{*} A \triangleright y u A-$; onomatopoetic.
$\epsilon \bar{a} \bar{\sigma} \iota$ (Hom.) 'they are' : Att. $\epsilon i \sigma \iota$, Lat. sunt, Skt. santi, Hitt. asanzi, < *'bsñti. ${ }^{6}$
${ }^{6}$ The usual explanation (cf. Buck, Comp. Gr. of Gk. and Lat. 246) is that ${ }_{\text {éa }} \alpha \iota$ is after

é $\gamma \epsilon i \rho \omega$ 'awaken' : Lat. expergīscor, Skt. jāgarti, with long vowel in reduplication due to a laryngeal, < *Aıger-; v'่ $\gamma \rho \epsilon \tau o s$ 'wakeless' has long $n$ from initial laryngeal.
$\dot{\epsilon}(f) \epsilon \dot{\epsilon} \delta o \mu a \iota$ (Hom.) 'seem' : Lat. videor, oída, Skt. veda; lack of aspiration would indicate fourth laryngeal initially (cf. next section). Root ${ }^{*} \gamma_{b} w e i d-$.
${ }^{\prime} \theta \in \in ́ \lambda \omega$ 'wish' : OCS želèti, Hes. $\phi a \lambda i \xi \epsilon \epsilon$. Sapir has noted (unpublished) the Toch. B cognate $y$ šelme with $y$-from 'e-. Root ${ }^{*}$ 'rghwel-.
é $\lambda$ á $\tau \eta$ 'pine' : Skt. lata, OHG linta, < *Ablent-; the Greek word is probably from Theme I, *Aelnt-.
é $\lambda$ aфos 'hind' : Goth. lamb, < *Ablembh-; the Greek word may be from Theme I, cf. above.
'́ $\lambda$ axús 'quick' : Skt. laghuş/raghuṣ, OHG lungar, *Able $(n)$ ghw-, cf. above.
'่́ $\bar{\epsilon} \gamma \chi \omega$ 'accuse, reproach' : Skt. langhati, Hitt. lenkais 'oath', < *? blengh-, with : because of lack of initial vowel in Hittite. The Greek word is doubtless in Theme I with contaminated vowels.
é $\lambda o v i \theta \omega^{\cdot} \epsilon \rho \chi o \mu a \iota$ (Hes.) : (possibly) Skt. rodhati, Goth. liudan, and possibly also to $\bar{\epsilon} \lambda \epsilon \dot{\theta} \theta \epsilon \rho o s$, Lat. līber, < *Ableudh-.
'є́ $\mu$ 's, ' 'є $\mu$ ' 'my' : Skt. mam, maya, etc., Hitt. amuk, $<{ }^{*}$ 'ьme-.
évє $\boldsymbol{\gamma \kappa \epsilon i ̂ \nu ~ ' d r a w , ~ c a r r y ' ~ : ~ S k t . ~ n a s ́ a t i , ~ a s ́ n o t i , ~ L a t . ~ n a n c i ̄ s c o r , ~ L i t h . ~ n e ̀ s ̀ t i , ~ H i t t . ~}$ nenk-, nenenk- 'rise, raise', < *'ınek-, but cf. à ${ }^{\prime}$ á $\gamma \kappa \eta$ above.
év $\nu$ '́a 'nine' : Skt. nava, Lat. novem, Goth. niun, Arm. inn, < ''ınewn.
'́ $\rho a ́ \omega$ 'love' : (probably) Skt. ramate 'is in repose', ariṣ 'desiring', < *Abr-.
${ }^{\prime} \rho \in \beta$ os 'darkness' : Skt. rajas, Goth. riqiz, Arm. erek, $<{ }^{*} A$ bregw-.
'́peiow 'support' : Lat. rīdica, < ${ }^{*}$ Abreid-.
'є $\rho \epsilon i \kappa \omega$ 'break' : Skt. rikhati, Lith. riẽkti, < *A ${ }^{*}$ ъreik-.
'́ $\rho \in i \pi \omega$ 'dash, tear down' : Lat. rīpa, ON rīfa, $<{ }^{*} A$ breip-.

'є $\rho \in ́ \sigma \sigma \omega$, 'є $\rho \in ́ \tau \eta s$ 'row(er)' : Lat. rēmus, OE rōwan, Skt. aritras (Theme I), < *Abret-
'є́є́v́roual 'eructate' : Lat. ē-rugō, ructō, Lith. raũgti, Arm. orcam, < *Abreug-. є́ $\rho \in \notin \phi \omega$ 'cover' and òpoфos 'reed (as roofing)' : OHG hirni-reba 'crane', NE roof, $<{ }^{*} A$ breph -
${ }^{\epsilon} \rho \in \in \in \theta \omega$ 'tear, break' : Skt. rakşas 'torment', < *Abrekhth-.
' $\rho \dot{\rho} \omega$ ' 'question' : ON raun 'essay', $<{ }^{*}$ Abrew-.
'єpvүóvza 'bellowing' : Lat. rugiō, < *Abreug-; in the form $\dot{\rho} \dot{\zeta} \zeta \omega$ 'growl' the laryngeal has coalesced with the $\rho$.
 same explanation as $\dot{\rho} \dot{\zeta} \zeta \omega$.
ö $\beta \rho \iota \mu$ оs 'mighty': $\beta \rho i \mu \eta$ probably has $e / o(<\gamma e / \gamma 0-$ ) prefix, or else it is from a root doublet.
ó $\delta \dot{\omega} \nu$ 'tooth' : Skt. dan, Lat. dēns, Lith. dantìs, Goth. tunpus, Arm. atamn; Theme I in $\epsilon \delta \omega$ : Hitt. etmi, etc.; root *' $\begin{aligned} & \text { de- } n \text {-. }\end{aligned}$
ò̀ıßpóv (Hes.) 'smooth' : OHG slīfan, NE slip, < ${ }^{*} A \imath(s) l e i b-$.
 ligà 'malady'.
ó $\lambda \iota \sigma \theta a ́ \nu \omega$ 'slip' : Lith. slýsti, NE sled, $<{ }^{*} A \imath(s) l e i d h-$.
ò $\lambda o \phi$ úpoual 'cry' : Arm. otb 'plaint', $<{ }^{*} A$ blebh-.
 Arm. $m \bar{e} g$ and $m \bar{e} z$ do not prove lack of inherited initial syllable, since they are Persian borrowings.
ö $\boldsymbol{\varepsilon} \epsilon \delta o s$ 'reproach' : Goth. naiteins, Skt. nīda 'affront', Arm. anicanem, < *Abnei-d-.
övoua 'name' : Skt. nāma, Lat. nōmen, Arm. anun, < *AbneAmn; the Greek word, however, is in Theme I with $o$-grade in the first syllable.
óvo䒑al 'injure, blame': Lat. nota 'sign, stigma' is probably a pejorative specialization of the root in övoцa.
övv̧ 'nail' : Skt. nakhas, Lith. nãgas, OE naegelel, Lat. unguis (Theme I), $<{ }^{*} A$ bnekhw-
ó $\pi \tau$ ós 'cooked' has probably prefixed $\dot{o}$ - to the base in $\pi$ ' $\epsilon \sigma \sigma \omega$ 'cook'.
ónvi$\omega$ 'take for wife' is probably a word of foreign origin, cf. Etr. puia-c 'and wife'.
 $<{ }^{*}$ Abreg-; Theme I is seen in ópquıa 'fathom' $<{ }^{*}$ Aerg-.
ò $\rho \in \chi \theta^{\prime} \epsilon \omega$ 'beat fast' $<{ }^{*} A$ breghdh-; the doublet $\dot{\rho} \circ \chi \theta^{\prime} \epsilon \omega$, with laryngeal assimilation in the $\rho$-, is from *Areghdh-.
ó $\bar{\iota} \nu \omega$ 'rise' : Skt. rinati 'causes to flow', Lat. rīvus, $<{ }^{*} A$ brei-; Theme I in ö $\rho \nu v \mu$, orior, < *Aer-.

${ }_{\text {ö }} \boldsymbol{\tau} \lambda o s,{ }^{*} \mathrm{~A} \tau \lambda a s: \tau \lambda \hat{\eta} \nu a \iota, \tau \epsilon \lambda a \mu \dot{\omega} \nu$, is from ${ }^{*}$ Ao-teleA-.
őфє入os 'utility' : Skt. phalam 'fruit' has probably the same prefix.
This list of words is not complete, but there is no particular advantage in making it so. Nor has a full citation of etyma and references been given, as these can easily be found in the usual etymological dictionaries. Further, many compounds, particularly those with the prefixes $\dot{b}-$ and $\dot{a}-$ ( $<\gamma o$ - and sm-) 'together, same' such as ö $\pi a \tau \rho o s$ 'of the same father', ő'surєs (Hes.) 'yoked
 á $\delta \epsilon \lambda \phi$ ós ('of the same womb') 'brother', etc., have necessarily been omitted.

## II. 'Prothesis' Alternating with Spiritus Asper

There are two reasons for this separate heading: (1) we are to deal with a phenomenon which, unlike the preceding, apparently manifests itself differently in different dialects, and (2) a newly discovered IE phoneme is involved. ${ }^{7}$ When
 spective cognates, Lat. ventus, Skt. varşan, Lith. veliù, it is at once apparent that more than a simple initial $w$ - is involved. Otherwise, why the alternative forms with 'prothesis', and why the rough breathing, since simple IE initial $w$ is totally lost in Greek (cf. iov: Lat. viola, ' $\mu^{\prime} \epsilon \omega$ : Lat. vomō)? When Hittite cognates are noted, e.g. hwantas 'wind' for the first pair mentioned above, it

[^2]becomes clear that an IH initial laryngeal is involved. We must then understand ä $\eta \mu \iota$ as coming from an IH base *xbweA-, and aiv $\omega$ ( < *hwanyō) as coming from an IH base ${ }^{*} x w$ b-. Since the laryngeals were lost early in IE, ${ }^{8}$ and since a $w$ in conjunction with a laryngeal in IH is represented as a phoneme distinct from the simple $w$ in both Greek and Germanic, ${ }^{9}$ we must understand that IE had a long, voiceless phoneme $h w$ (in distinction to the voiced simple $w$ ) which was the result of the conjunction of any one of the first three (voiceless) laryngeals and a $w$ in IH or early IE. The same is true of $y$ also, but that is outside the scope of this study since apparently no 'prothesis' is involved. Presumably the fourth (voiced) laryngeal ( $\gamma$ ) did not enter into this union, and there is no clear proof that it did. ${ }^{10}$ This development, as far as Greek is concerned, can be summarized in the following table:

| IH | *xéwA-'blow' | * $x$ bwéA- | ${ }^{*} x w_{\text {b }} A$ - |
| :---: | :---: | :---: | :---: |
| IE | *au- | * weè- $^{\text {en }}$ | *hwa- |
| Gk. | av́pa | ä $\eta \mu \iota$ | aiv ${ }^{\text {a }}$ |
| Cog. | Lat. aura 'breeze' |  | Hitt. hwantas 'wind', Lat. ventus |
| IH | *: ${ }^{\text {éw }}$ (s)- 'see, light' |  | *? $w e$ (s) $-p$ - |
| IE | *au(s)- |  | *hwe(s)-p- |
| Gk. | aűpoo <br> Hom. $\ddot{\eta} \omega s$ < ${ }^{*}{ }_{f} \sigma \sigma \omega$ |  | $\ddot{\epsilon} \sigma \pi \epsilon \rho \circ$ S |
| Cog. | Lat. aurōra, Hitt. auszi 'sees' |  | Lat. vesper |
| IH | *Aéwrg- 'shut in' | *A ${ }^{\text {bwérg- }}$ | *Awerg ${ }^{\text {- }}$ |
| IE | *eurg- | *)werg- | *hwerg- |
| Gk. |  |  | ${ }_{\text {¢ }}^{\text {¢ }}$ ¢ ${ }^{\text {as }}$ |
| Cog. | Lat. urgeō |  | Skt. vrajas |

In general, it is to be noted that forms with 'prothesis' are associated with Homer or the dialect(s) underlying Homer, while forms with spiritus asper are associated with Attic, though this is not always true. The form $\epsilon i \rho \gamma \omega<$ ${ }^{*} \epsilon_{f} \epsilon \rho \gamma \omega$, for instance, is certainly Attic. As we have noted before, mutual contaminations have affected different forms from the same root; thus $\epsilon i \rho \gamma \omega$ and é $\rho \xi$ as (Plato, Politicus 285B) are normal for their respective ablaut grades, while $\epsilon_{\epsilon} \rho \gamma \omega$ represents a contamination of the latter type with the former. On the whole, all that can be said is that Attic 'prefers' the forms with rough breathing. The following is a catalog of such words compiled largely from Sommer, ${ }^{11}$ though his treatment of them, without benefit of the laryngeal hypothesis, is extremely specious and ad hoc.

[^3] out 'prothesis' but with spiritus asper in alvo 'scatter by the wind' alternating with $\overline{\bar{a}} \nu \epsilon \epsilon\left(<*_{a f a \nu \epsilon \omega)}\right)$. The third laryngeal initial is evidenced by Hitt. hwantas : Skt. vāti, OCS vĕjati, Goth. waian 'blow', Lat. ventus, vannus, NE wind, winnow, in Theme I with $r$-extension in av́pa, Lat. aura. Benveniste ${ }^{12}$ connects the above, and probably rightly, with Hitt. huwai- 'run, flee' : ${ }_{i}^{\prime} \in \mu a \iota ~(<* h w e i-) ~ ' r u s h, ~$ hasten', and also aiєtós, Lat. avis 'bird'.
$\dot{a} \lambda i \sigma \kappa о \mu a \iota ~ ' a m ~ t a k e n ', ~ A r c . ~ f a \lambda o \nu \tau \iota s, ~ L a c . ~ \tilde{\eta} \lambda \omega \tau \epsilon \iota s\left(<{ }^{*} \epsilon \epsilon \epsilon \lambda \omega \tau \epsilon \iota s\right)$ : (possibly) Goth. wilwan 'pillage'. alp 'take' would belong here if there were any evidence for digamma (cf. Boisacq), as well as á $\epsilon i \rho \omega$ 'lift'. Root probably *xwel-, certainly so if Hitt. hullas- 'be defeated' belongs here.
éapóv (Hes.) 'bath' : Umbr. vesticatu 'libato', OHG wasal 'wetness, rain', < *Awes-.
 weotuma 'bridal price', < *Abwed-/*Awed-. It would be attractive to connect Skt. vadhūss 'bride', NE wed, and Hitt. hwitt- 'lead', but in both cases different final consonants are involved.

єiккобь, Hom. '̇єєккоб兀 'twenty'. Sommer 108 notes a Theran HIKADI. We can perhaps expect analogical influences from other numerals; but if not, the root is *Awei-kmbta.
$\epsilon^{\prime} \lambda \lambda \omega$, $\epsilon^{i} \lambda \epsilon \epsilon \omega$ 'roll, twist up', pass. 'rolled together, thronged'; aor. inf. ${ }^{\prime} \lambda \lambda \sigma a \iota$, Hom. 'є́ $\hat{\epsilon} \sigma a \iota$, Ion. $\dot{\alpha} \lambda \eta$ 's, Hom. áo $\lambda \lambda \dot{\eta} s$ 'rolled together, thronged', $\dot{\eta} \lambda i a \iota a$ 'popular tribunal', probably also ädcs 'in a crowd, enough' if not from a root *swel-. The root is *xbwel-/*xwel- in view of the Hittite cognates hulaliya- 'wrap, wind', hulali 'distaff'. ${ }^{13}$ Hitt. hulla- 'smite, destroy' probably belongs here too (certainly not to $\partial \lambda \lambda \nu \mu \iota$ as Couvreur thinks ${ }^{14}$ ), for one of the meanings of Hom. $\epsilon^{\prime \prime} \lambda \omega$ is 'drive along, smite', cf. $\nu \hat{\eta} a \kappa \epsilon \rho a \nu \nu \hat{\varphi}$ è $\lambda \sigma a s$. Probably $\nexists \lambda \iota \xi$ 'spiral', è $\lambda i \sigma \sigma \omega$, Ion.Att. $\epsilon i \lambda i \sigma \sigma \omega\left(<{ }_{\epsilon \epsilon \epsilon} \epsilon \iota \sigma \sigma \omega\right)$ 'roll', and $\epsilon^{\lambda} \mu \iota s$ 'worm' also belong here.
 Skt. vrnoti 'cover', < *Abwe-l/r-, *Awe-l/r-.
 'command', Lat. verbum, Goth. waurd, Hitt. hwrta- 'curse', < *xbwer-/*xwer-.
 'rural property', < *Aeuk-/*Awek-.
$\dot{\epsilon} \kappa \kappa \dot{\omega} \nu$ 'willing' : Skt. vaśmi 'I wish', Hitt. wekzi 'asks, desires', < *'wek-, though no forms with 'prothesis' can be cited.
 voluptās, Lith. vẽlyti, NE will, < ${ }^{*} \gamma^{\mathrm{b}}$ weld-/*${ }^{*}$ weld-, with fourth laryngeal inferred from the consistent lack of aspiration.
 scriptional HEAIII $\Delta^{\prime}$ and AФE $\operatorname{lIIZEI,~}{ }^{16}$ though these may be analogical and the root related to the preceding with a $-p$ - extension.

[^4]$\epsilon^{\prime \prime} \lambda \eta$, é $\lambda \eta, \epsilon i \lambda \eta \eta$ 'gleam of the sun' $<{ }^{*}$ Abwel-/ ${ }^{*}$ Awel-.
 Goth. wasti, NE wear, Hitt. wassi-, < *?wes-. Theme I (*?au-) is seen in Lat. $i n d u \bar{o}, e x u \bar{o}$ 'put on, off', and in Lith. avì̀ 'wear footgear'.
${ }_{\epsilon}^{\epsilon} \rho \gamma \omega$, Hom. ${ }^{\prime} \in \notin \gamma \omega$, Att. $\epsilon i \rho \gamma \omega$ 'shut in, enclose' : Skt. vrajas 'enclosure', Lat. urgeō (Theme I), Goth. wrikan 'press on, torment', < ${ }^{*}$ Abwerg-/*Awerg-. A form ${ }^{*} \epsilon \rho \gamma \omega$ must be posited to account for such forms as äфє $\rho \kappa \tau о s$ (Aeschylus, Septem 445) and $\epsilon_{\rho} \rho \xi a s$ (Plato, Politicus 285B), though $\epsilon i \rho \gamma \omega\left(<{ }_{\epsilon \epsilon \epsilon \rho \gamma \omega)}\right.$ with 'prothesis' instead of aspiration was dominant and influenced $\ddot{\epsilon} \rho \gamma \omega$. The latter, however, may be analogical to ${ }^{\epsilon} \rho \gamma \omega$ 'work' with smooth initial $w$-.
'є $\rho \sigma \eta$, Hom. ' $\epsilon \in \rho \sigma \eta$ 'dew' : Skt. varṣati 'it rains', < *Abwers-/*Awers-.
є̈ $\sigma \pi \epsilon \rho \rho s$ 'evening' : Lat. vesper, Att. $\epsilon \omega s$ 'dawn'; Theme I appears in Hom. $\eta^{\eta} \omega s$ ( $<{ }^{*}{ }_{a f \sigma} \sigma \mathrm{~s}$ ), Aeol. av̉ $\omega \mathrm{s}$, aüpıov 'morning', Lat. aurōra, Lith. aušrà, Hitt. auszi 'he sees'. Root *: au(s)-, *? we(s)-.
̇̇бтia 'dwelling, foyer' : Lat. Vesta, Goth. wists 'abode', Hitt. hwes- 'live', hwesas 'alive, raw', < *xwes-.
ioos, Hom. ধivos, and the occasional l${ }^{\prime} \sigma o s$ indicate the presence of the phoneme $h w$ initially, though the etymological connections are uncertain (cf. Boisacq).

There are, of course, other words that once had an initial laryngeal before $w$, but these either do not occur with the zero grade of the first syllable which would result in aspiration (as ácio $\omega /$ aù $\dot{\eta} \dot{\prime}$ ), or else, by Grassmann's law, they are unable to show aspiration (as äe $\theta \lambda o \nu / a \hat{\theta} \theta \lambda o \nu$ ).

## III. Laryngeal Reflexes in Homer

This section is so entitled because the phenomenon involved is specifically Homeric, though it also manifests itself elsewhere. As we have noted above, there is a class of words that should show 'prothesis' in Greek, but do not; and we have tentatively ascribed this anomaly to the presence of the fourth laryngeal in initial position. That is, after the proportion augeō : aủjáv $\omega=v a k s ̧ a y a t i: ~$ $\dot{a} \epsilon^{\prime} \xi \omega$ we should expect a similar proportion ambhas : ád $\rho \dot{\prime}=$ nabhas $:{ }^{*}$ à $\nu \epsilon \phi o s$. But *ávє申os does not exist; instead we have $\bar{\nu} \dot{\epsilon} \neq o s$ with a long initial $\nu$, at least one that 'makes position' in Homer. Similarly we have גamapós 'slack, soft', $\lambda a \pi \dot{a} \rho a$ 'soft part of the body', $\lambda a \pi a ́ \zeta \omega$ 'weaken, ravage' : Skt. alpas, Lith. alpnas 'little, weak'; a $\alpha a \pi \dot{\alpha} \zeta \omega$ 'empty, make poor' is either from a different root with initial $x$ instead of $:$ or else it is in Theme I. The long voiceless $\lambda$ is seen also in $\lambda i \pi o s$ 'fat', $\lambda \iota \pi a \rho o ́ s ~ ' a n o i n t e d, ~ s l e e k ' ~: ~ S k t . ~ l i m p a t i ~ ' a n o i n t s ' ; ~ a ̀ \lambda \epsilon i \phi \omega ~ ' a n o i n t ' ~ i s ~ a ~$ root doublet. $\lambda o ́ \phi o s$ 'crest, tuft, ridge' : à $\lambda \phi$ ós 'white spot', Celt. Alpēs 'white mountains', Lat. albus, OHG elbiz 'swan', Hitt. alpas 'cloud'. A long voiceless $\mu$
 words, as well as a few more, ${ }^{17}$ make position, hitherto inexplicably, in Homer. Some examples follow.

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\(\nu^{\prime} \epsilon \phi\) os and \(\nu \epsilon \phi^{\prime} \lambda \lambda\) : Skt. ambhas:
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\(\lambda a \pi \dot{\alpha} \rho \eta\) : Skt. alpas:
    áv \(\tau \iota \kappa \rho \dot{v} \delta \grave{̀} \pi a \rho a i \lambda a \pi a ́ \rho \eta \nu \delta \iota a \mu \hat{\eta} \sigma \epsilon \chi \iota \tau \omega ิ \nu a\) (Г 359)
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\(\lambda i \pi \pi o s, \lambda \iota \pi a \rho o ́ s: S k t . l i m p a t i:\)
    aíei \(\begin{aligned} & \text { è } \\ & \lambda \iota \pi a \rho o i . ~ . ~ . . . . . . . . ~(o ~ 331) ~\end{aligned}\)
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入óфos: à \(\lambda \phi\) ós, Lat. albus:
    äкроข ن́ \(\pi \bar{̀} \lambda\) 入óфov. . . . . . . . . (N 615)
мa入aкós: Lat. mollis:
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In view of the fact that what cognates we have in Theme I for the above words show initial $a$－，and in particular Hitt．alpas＇cloud＇：à $\lambda \phi$ ós＇white spot＇， where the initial $a$－instead of $h a$－indicates the second laryngeal，I have assumed that all of these words have initial $\bar{\lambda}, \bar{\mu}, \bar{\nu}(h l, h m, h n)$ as a result of $:+l, m, n$ ． There is no reason why the other two voiceless laryngeals＇and $x$ should not have caused this phenomenon also，as was the case with $w$ and $y$ ；I simply know of no examples to prove it．Sturtevant ${ }^{18}$ has called my attention to the actual spellings $\lambda h, \mu h$ ，etc．for the long，voiceless liquids and nasals in dialectal inscrip－ tions，though generally they result from a lost initial $\sigma$ ．Finally，this phe－ nomenon must be of Indo－Hittite origin，though Greek is the only language I know of that gives anything in the nature of proof．Hitt．nepes and malai once had an initial ：，and the $n, m$ in these words may have been long and voiceless too，but there is nothing in the writing of them to indicate it．At any rate，it is gratifying to have the last major problem in Homeric versification solved by the laryngeal hypothesis．

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[^0]:    ${ }^{1}$ Cf. particularly F. de Saussure, Mémoire sur le système primitif des voyelles dans les langues indo-européennes (Leipzig, 1879); H. Möller, Die semitisch-vorindogermanischen Laryngalen Konsonanten, Danske Videnskabernes Selskabs Skrifter 5.4.1-91 (1917); A. Cuny, Études indo-européennes I (Krakow, 1935) ; W. Couvreur, De Hettitische $b$ (Leuven, 1937); and the recent articles by E. H. Sturtevant, Lang. 16.81-7, 179-82, 273-84 (1940).

    The present article is a reworking of material included in my doctoral dissertation (Princeton University, 1938). I wish to thank Professors Harold H. Bender and Edgar H. Sturtevant for their many kindnesses.

[^1]:    ${ }^{2}$ J. A. Kerns and B. Schwartz in JAOS 60.181-92 (1940) argue that the second must have been a voiced velar spirant. This theory, however attractive from the standpoint of Gestalt, is not in accord with the facts (cf. sections II and III below).
    ${ }^{3}$ Cf. E. H. Sturtevant, Lang. 16.81-7.
    ${ }^{4}$ Origines de la formation des noms en indo-européen 152 (Paris, 1935).
    ${ }^{5}$ 'Der erste Vokal mit dem Spiritus lenis is zuweilen altertümlich (ursprünglich als Schwa-vokal, dann aber quantitativ mit dem ursprünglichen e zusammengefallen), besonders im Griechischen, noch erhalten' (Laryng. Kons. 9).

[^2]:    ${ }^{7}$ Edward Sapir has treated the subject in his article Glottalized Continuants in Navaho, Nootka, and Kwakiutl (with a note on Indo-European), Lang. 14.248-74 (1938). The present investigation, however, was quite independent of Sapir's.

[^3]:    ${ }^{8}$ There is no space here to go into the proof. Suffice it to say that no laryngeals survive per se in any IE language, and that their disappearance leaves exactly the same results in all the IE languages.
    ${ }^{9}$ The existence of this phoneme in Germanic was discovered by H. L. Smith Jr. See his article, The Verschärfung in Germanic, below.
    ${ }^{10}$ Cf. Sturtevant, Lang. 16.85, fn. 3.
    ${ }^{11}$ Griechische Lautstudien 83-136.

[^4]:    ${ }^{12}$ Origines 155.
    ${ }^{13}$ Cf. Sturtevant. A Hittite Glossary ${ }^{2}$ s.v.
    ${ }^{14}$ De Hettitische $h 14,24 \mathrm{f}$.
    ${ }^{15}$ Cf. F. Solmsen, Untersuchungen zur griechischen Laut- und Verslehre 236.
    ${ }^{16}$ Cf. K. Brugmann, IF 16.492, and F. Sommer, Griechische Lautstudien 107-8.

[^5]:    ${ }^{17}$ A complete catalog can be found in La Roche, Homerische Untersuchungen 49 ff . There are a few exceptions in stereotyped phrases such as $\chi \rho v \sigma \dot{\epsilon} \circ \iota \sigma \check{\imath} \nu \in \phi \epsilon \sigma \sigma \iota \nu$ ( N 525 ) and
     $\mu \dot{\epsilon} \boldsymbol{\gamma}$ as also makes position, though there is no other evidence for an initial laryngeal. (This word may have had $\sigma$-movable after $\sigma \mu \iota \kappa \rho \delta \nu$ ).

[^6]:    ${ }^{18}$ Cf．The Pronunciation of Greek and Latin ${ }^{2}$ 63－4（Linguistic Society，1940）．

